

REMARKS

Claims 1–23 are pending, of which Claims 1, 12, and 23 are independent.

Rejections of Claims 1–7, 9, 11, and 23 under 35 U.S.C. § 103(a)

Claims 1–7, 9, 11, and 23 have been rejected as being unpatentable over U.S. Patent No. 6,332,198 B1 (Simons) in view of U.S. Patent No. 6,201,788 (Ishiwatari). Specifically, the instant Office Action states that Simons discloses a first switch fabric (cross connect cards 562), a second switch fabric (switching fabric card 570), and switch interface means (forwarding cards 546). The Office Action further states that it would have been obvious to combine Simons with Ishiwatari’s facility protection switching at a signal substrate relative to a rate at which the signals are received by the first switch fabrics.

Simons’s FIGS. 35A and 35B show a network device 540 in which universal port cards 554 are connected to switching fabric cards 570 via cross connect cards 562 and forwarding cards 546. The instant Office Action states that because each cross connect card 562 connects eight universal port cards 554 to the switching fabric card 570 via the forwarding cards 546, each cross connect card requires only four active lines and one redundant line. In other words, there are five connections between each cross connect card 562 and the switching fabric card 570—one connection for each forwarding card 546. Removing the forwarding cards 546 would not change the number of connection between the cross connect card 562 and the switching fabric card 570 because each forwarding card 546 supports only one connection.

In contrast, Claim 1 recites, in relevant part, “coupling via [] respective switch interface modules [that] allow[s] a reduced number of links between the first switch fabrics and the second switch fabric relative to coupling the first switch fabrics directly to the second switch fabric.” (Claim 23 recites a similar element.) That is, removing the switch interface means would increase the number of links between the first and second switch fabrics. Therefore, the coupling via Simons’ forwarding cards 546 does not correspond to the coupling via the switch interface modules recited in Claim 1 because removing Simons’ forwarding cards 546 would not change the number of connections between Simons’ cross connect card 562 and Simons’ switching fabric card 570.

The Office Action also notes that Simons employs more port cards 556 than forwarding cards 546. Although the Office Action suggests that this supplies the “reduced number of links between the first switch fabrics and the second switch fabric relative to coupling the first switch fabrics directly to the second switch fabric” recited in Claim 1, Simons’ reduction in coupling is not between first and second switch fabrics. Rather, Simons’ port cards 556 are coupled to the forwarding cards 546 via respective cross connect cards 562, which the Office Action identifies as the first switch fabric. Thus, Applicants respectfully submit that Simons does not disclose “coupling via [] respective switch interface modules [that] allow[s] a reduced number of links between the first switch fabrics and the second switch fabric relative to coupling the first switch fabrics directly to the second switch fabric,” as recited in Claim 1 or the similar coupling recited in Claim 23.

As argued in Applicants’ previous reply and acknowledged in the Office Action, Ishiwatari also fails to disclose the coupling recited in Claims 1 or 23. As neither Simons nor Ishiwatari supplies the missing coupling, their combination necessarily fails to include the missing coupling. Therefore, Applicants respectfully submit that Claims 1 and 23 patentably distinguish the combination of Simons and Ishiwatari. Claims 2–7, 9, and 11, which depend from Claim 1, are patentable over Simons and Ishiwatari for at least the same reason. Accordingly, Applicants request withdrawal of the rejection of Claims 1–7, 9, 11, and 23 under 35 U.S.C. § 103.

The Office Action further states that “coupling … allowing a reduced number of links,” as recited in Claim 1, is a “conclusive statement based on intended use of the claim, rather than limiting the claimed invention.” 4:17–18. According to MPEP § 2106, however,

a claimed invention may be a combination of devices that appear to be directed to a machine and one or more steps of the functions performed by the machine. … [A]n apparatus claim with process steps is not classified as a "hybrid" claim; instead, it is simply an apparatus claim including functional limitations. (emphasis supplied)

Applicants believe the “coupling … allowing a reduced number of links” to be a functional element, not a conclusive statement based on intended use; therefore, Applicants respectfully submit that Claim 1 distinguishes Simons and Ishiwatari.

Rejection of Claims 12–18, 20, and 22 under 35 U.S.C. § 103(a)

Claims 12–18, 20, and 22 have been rejected as being obvious over Simons in view of Ishiwatari. In particular, Simons' forwarding cards 546 have been identified as “performing facility protection switching at multiple switch interface modules,” as recited in Claim 12.

According to Simons, the forwarding cards 546 process certain network control information, generate network control payloads, and forward user data payloads from cross connection cards to switch fabric cards. Simons, 46:37–54. The cross connection fabrics 570 perform switching, including switching from primary forwarding cards 546 to redundant forwarding cards. In fact, the forwarding cards 546 each have only one input and one output, so they cannot perform any switching, much less “facility protection switching,” as recited in Claim 12. Thus, Simons' forwarding cards 546 do not “perform[] facility protection switching at multiple switch interface modules,” as recited in Claim 12.

As Ishiwatari also fails to disclose “performing facility protection switching at multiple switch interface modules,” as recited in Claim 12, the combination of Simons and Ishiwatari also does not disclose “performing facility protection switching at multiple switch interface modules,” as recited in Claim 12. Therefore, Applicants respectfully submit that Claim 12 patentably distinguishes Simons and Ishiwatari. Likewise, dependent Claims 13–18, 20, and 22 distinguish Simons and Ishiwatari for at least the same reason. Accordingly, Applicants request withdrawal of the rejection of Claims 12–18, 20, and 22 under 35 U.S.C. § 103.

Rejection of Claims 8, 10, 19, and 21 under 35 U.S.C. § 103(a)

Claim 8 and 19 stand rejected under as being unpatentable over Simons in view of U.S. Patent No. 6,456,587 B2 (Taniguchi). Claims 10 and 21 stand rejected as being unpatentable over Simons in view of Ishiwatari and further in view of U.S. Patent No. 2004/0213205 A1 (Li). As stated in the Applicants' previous reply, Taniguchi discloses a method for handling failures in a ring transmission system, and Li discloses a voice packet switching system that uses a switch fabric to switch channels over packet and non-packet transmission links. Because neither Taniguchi nor Li remedies the defects of Simons and Ishiwatari with respect to base Claims 1 and 12, Applicants submit that dependent Claims 8 and 19 should be allowed for at least the same reasons as the base claims from which they depend.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims, namely Claims 1–23, are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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